

**MODULE 3**  
**STORAGE AND TREATMENT IN CONTAINERS**

**3.A.        APPLICABILITY**

- 3.A.1.        The requirements of this module pertain to the operation of hazardous waste container storage and processing areas (also referred to as container management areas) at the facility. The Permittee shall comply with all requirements established in this permit when storing and/or treating any wastes or other materials in the container management areas, including those which do not carry an EPA waste code (e.g., industrial waste, exempt hazardous waste, site generated waste, non-hazardous waste, etc.).
- 3.A.2.        The Permittee may store wastes, as outlined in this module, in the container storage and processing areas specified below, up to the capacities listed. Storage of wastes in containers in any other areas is prohibited. For purposes of determining compliance with the capacity limitations, all containers shall be considered to be full to their respective capacities.
- a.    Receiving and holding floor area in building E-1 -- 200 55-gallon containers or 11,000 gallons when Bays 1 and 6 are in storage mode; or 292 55-gallon containers or 16,060 gallons when Bays 1 and 6 are in receiving mode.
  - b.    Receiving and holding floor area in building E-5 -- 200 55-gallon containers or 11,000 gallons when Bays 1 and 6 are in storage mode; or 300 55-gallon containers or 16,500 gallons when Bays 1 and 6 are in receiving mode.
  - c.    Bays 3, 4, and 5 in building E-1 -- 192 55-gallon containers each or 10,560 gallons each;
  - d.    Bays 1, 2, and 6 in building E-5 -- 192 55-gallon containers each or 10,560 gallons each in bays 1 and 6 when bays 1 and 6 are in storage mode; or 96 55-gallon containers each or 5,280 gallons each in bays 1 and 6 when bays 1 and 6 are in receiving mode; 144 55-gallon containers or 7,920 gallons in bay 2;
  - e.    Building E-2 -- 1448 55-gallon containers or 79,640 gallons (exclusive of the workstations);
  - f.    Workstations WS1, WS2, and WS3 in building E-2 -- four 55-gallon containers each or 220 gallons each;
  - g.    Building E-3 -- 2520 55-gallon containers or 138,600 gallons;
  - h.    Building E-6 -- 1384 55-gallon containers or 76,120 gallons;

- i. Building E-7 -- 2552 55-gallon containers or 140,360 gallons;
- j. Building E-4 -- 1284 55-gallon containers or 70,620 gallons (exclusive of the repack area and decant area);
- k. Repack area in building E-4 -- four 55-gallon containers or 220 gallons;
- l. Decant area in building E-4 -- four 55-gallon containers or 220 gallons;
- m. Breezeway -- 256 55-gallon containers or 14,080 gallons (176 55-gallon containers or 9,680 gallons on the breezeway and 80 55-gallon containers or 4,400 gallons on the conveyors);
- n. Direct burn pad -- one direct burn vessel (660 gallons);
- o. Drive through direct burn station -- one direct burn tanker designated as T-411 and up to 12 55-gallon containers, designated as T-411D1, T-411D2, or T-411D3, staged for transfer to the tanker (7,500 gallons total);
- p. Truck unloading direct burn station -- one direct burn tanker designated as T-413 (7,500 gallons);
- q. Two refrigerated trailers parked in E-1, E-5, or E-4 receiving docks -- 84 55-gallon containers or 4,620 gallons. E-4 receiving dock is limited to one refrigerated trailer and 70 55-gallon containers or 3,850 gallons;
- r. Cylinder storage area and cylinder feed station combined -- 800 9" diameter by 52" high, compressed gas cylinders or equivalent.
- s. Cylinder feed station -- 20 9" diameter by 52" high, compressed gas cylinders or equivalent. This capacity does not include a cylinder or cylinders in the glove box. The glove box at the cylinder feed station will only be used in emergency situations (i.e., leaking cylinders). The glove box will remain empty at all other times.
- t. Drum pumping storage on slag pad east of the of the bulk solids maintenance bay -- 24 55-gallon containers or 1,320 gallons; equipped with portable secondary containment.
- u. Drum pumping station -- 4 55-gallon containers or 220 gallons.

3.A.3. The Permittee may treat or process wastes in containers in the container management areas listed below. The treatment or other processing operations that may occur include decanting and repacking (including lab pack inspection, lab

pack repacking, lab pack solidification, liquid bulk-up, compatibility testing and ignitability screen, container repacking, and debris processing) as described in Attachment 8.

- a. Repack area in building E-4.
- b. Decant area in building E-4 (decanting only).
- c. Workstations WS1, WS2, and WS3 in building E-2.
- d. Drive through direct burn station (decanting only).

The Permittee may also shred containers in the shredder, transfer wastes from one tanker to another, and feed wastes to the kiln from the direct burn pad, the drive through direct burn station, the truck unloading direct burn station, and the drum pumping station as described in Attachment 8. Any other treatment or processing of waste in containers or in the container management areas is prohibited.

3.B. OPERATION AND MAINTENANCE

- 3.B.1. The Permittee shall maintain the container management areas and secondary containment systems as constructed and in accordance with the drawings contained in Attachment 10.
- 3.B.2. Modifications to the drawings for the container management areas and secondary containment systems shall be allowed only in accordance with the permit modification requirements in Condition 1.D.
- 3.B.3. The Permittee shall not proceed with construction or installation of a new or modified container management area or secondary containment system without the approval of the Executive Secretary unless construction is allowed as outlined in Condition 1.D.
- 3.B.4. The Permittee shall maintain the container storage and processing areas and any ancillary equipment and secondary containment systems in good repair. Routine maintenance shall be performed at sufficient frequency to ensure that the container storage and processing areas and any ancillary equipment and secondary containment systems remain in good repair. Malfunctions and deterioration shall be corrected as expeditiously as possible.
- 3.B.5. The container management areas and secondary containment systems shall be designed, constructed, maintained and operated to minimize the possibility of a fire, explosion, or any unplanned sudden or non-sudden discharge of hazardous

waste or hazardous waste constituents to the air, soil, groundwater, surface water or any other location which could threaten human health or the environment.

- 3.B.6. The Permittee shall comply with the provisions specified in Attachment 8 -- Waste Storage, Processing, and Tracking.

3.C. PERMITTED AND PROHIBITED WASTES

- 3.C.1. The Permittee may store and/or treat in the container storage and processing areas the wastes identified in Condition 2.C.1. unless prohibited in Condition 3.C.2. through 3.C.7. subject to the requirements of this permit.

- 3.C.2. The following shall not be stored and/or treated in any of the container storage and processing areas at any time:

a. Any waste or material identified in Condition 2.C.2.

- 3.C.3. The following shall not be stored in any of the container management areas except buildings E-6 and E-7. However, these may be located in the receiving and holding floor areas of buildings E-1 and E-5, bays 1 and 6 when in receiving mode, building E-4, the repack area or decant room in building E-4, the breezeway, the direct burn pad, the drive through direct burn station, the truck unloading direct burn station, the drum pumping storage area, or the drum pumping station for a period of up to ten days as part of the process for staging feed to the incinerator or other processing operations. They may only be processed in the repack area or decant room in building E-4 as described in Condition 3.A.3.

a. Liquids with a flash point less than or equal to 140 °F.

- 3.C.4. The following shall not be stored in any of the container management areas except the bays in buildings E-1 and E-5. However, these may be located in the receiving and holding floor areas of buildings E-1 and E-5, building E-4, the repack area or decant room in building E-4, the workstations in E-2, the breezeway, the direct burn pad, the drive through direct burn station, the truck unloading direct burn station, the drum pumping storage area, or the drum pumping station for a period of up to ten days as part of the process for staging feed to the incinerator or other processing operations. Other materials which are potentially incompatible with these materials shall not be stored in the same bay as these materials.

- a. Cyanide or sulfide bearing waste as described in R315-2-9(f)(v).  
b. Oxidizers as described in R315-2-9(d)(1)(iv).

3.C.5. The Permittee may store a maximum of 84 55-gallon containers or 4,620 gallons of infectious waste at any time.

3.C.6. The following shall not be stored in any of the container management areas except the compressed gas cylinder storage area and the cylinder feed station. However, they may be off-loaded into buildings E-1 or E-5 and placed into racks while in E-1 or E-5. Compressed gas cylinders shall not remain in buildings E-1 and E-5 more than 24 hours from the time the cylinders are off-loaded before being transferred to the cylinder storage area.

a. Compressed gas cylinders.

3.C.7. The Permittee shall not store water reactive wastes in the drum pumping storage area or the drum pumping station at any time.

3.D. OPERATING REQUIREMENTS

3.D.1. If a non-cylinder container holding hazardous waste is not in good condition (e.g., severe rusting, bulging, apparent structural defects) or it begins to leak, the Permittee shall transfer the hazardous waste from such container, or the container of hazardous waste itself, to a DOT acceptable container in accordance with Attachment 8, as soon as possible, but no later than two hours from the time the problem was first discovered. If a compressed gas cylinder is determined to be leaking, it will be transferred to the glove box at the cylinder feed station where it will be allowed to leak into the glove box while the glove box is exhausted to the incinerator. If the incinerator is down when a cylinder is leaking, the cylinder will be transferred to an isolated portion of the property and allowed to leak until empty.

3.D.2. The Permittee shall assure that wastes or other materials in containers are compatible with the containers. Containers must be made of or lined with materials which will not react with, and are otherwise compatible with, the hazardous waste stored in them, so that the ability of the containers to contain the waste is not impaired.

3.D.3. The Permittee shall not place incompatible waste or materials in the same container.

3.D.4. The Permittee shall not place hazardous waste or materials in an unwashed container that previously held an incompatible waste or material.

3.D.5. A container holding a waste that is incompatible with any waste or other material shall be separated from the other waste or materials by placing it in one of the bays in buildings E-1 or E-5. No incompatible wastes shall be stored in the

container management areas identified in Condition 3.A.2.a., b., e. through q., and s. through u. Compressed gas cylinders shall be stored in racks in the cylinder storage area with compatible materials in each rack. Cylinder compatibility and rack separation shall be in accordance with the International Fire Code.

- 3.D.6. Containers shall always be closed except when the Permittee is adding or removing wastes or treatment reagents, as allowed by this permit, to or from the containers.
- 3.D.7. Each container shall be situated near a fume exhauster and ventilated during the time that it is open inside a building in accordance with Attachment 14.
- 3.D.8. Containers shall not be opened, handled, stored, or managed in a manner which may rupture the containers or cause them to leak.
- 3.D.9. The Permittee shall unload any transport vehicle carrying containers within ten days of being received at the facility. The containers shall be placed in the receiving and holding floor areas of buildings E-1 or E-5, bays 1 or 6 when in receiving mode, or in the temporary extensions of the receiving areas outlined in Attachment 8 until the material has been accepted. Compressed gas cylinders may be placed into the cylinder storage area prior to acceptance. Those cylinders in the cylinder storage area that are not yet accepted shall be clearly identified in a unique manner from those cylinders that have been accepted.
- 3.D.10. The Permittee shall maintain sufficient aisle space in the container management areas to allow the unobstructed movement of personnel, fire protection equipment, discharge control equipment, and decontamination equipment to all areas of the container management areas. Sufficient aisle space shall be maintained such that access can be made to each container to check for leaks, container damage or deterioration, and also to view the barcode label. Containers shall be placed, and aisle space maintained, as shown on drawings D-800-M-400 and D-034-M-401 in Attachment 10.
- 3.D.11. The Permittee shall not locate containers holding ignitable or reactive waste, including those which have not yet been accepted, within 50 feet of the facility's property line.
- 3.D.12. No smoking shall be allowed within 50 feet of any of the container management areas. The Permittee shall take precautions to prevent accidental ignition or reaction of waste. The waste shall be separated and protected from sources of ignition or reaction including, but not limited to: open flames, smoking, cutting and welding, hot surfaces, frictional heat, sparks (static, electrical, or mechanical), spontaneous ignition (e.g., from heat-producing chemical reactions), and radiant heat. Such sources of ignition shall be allowed only after adequate additional

precautions have been taken to prevent ignition of wastes or other materials and a hot work permit has been issued. Notwithstanding this condition, a hot work permit is not required for performing storage and acceptance (fingerprint) analyses within the hoods of the E-5 fingerprint area.

- 3.D.13. The Permittee shall maintain a record of the location of each container in the container storage area. A history of the movement of each container of waste will be maintained from the time it is placed into one of the container management areas until it is either incinerated or manifested off-site. The Permittee shall comply with the waste tracking provisions in Attachment 8. The Permittee shall provide access to the electronic waste tracking system portion of the operating record for the Executive Secretary to review. This shall be accomplished by making available a remote link to the computer system and the appropriate query system for accessing the required data. Data to be accessible include manifest information, load sample analyses, weights, current locations, movement histories, and the dates/times incinerated or transferred off-site.
- 3.D.14. Several small containers which have been shrink-wrapped or otherwise bound together and attached to a pallet and shipped as a single container may be accepted and managed at the facility as one container. If the containers on a pallet are not bound as described above, they must be managed as individual containers.
- 3.D.15. Containers, not including gas cylinders, shall be stored on pallets. Compressed gas cylinders are stored in racks as outlined below. Containers on pallets shall be stored on racks where available and as outlined below. Where racks are not available, containers may be stacked on pallets as outlined below. The containers shall be stacked neatly, wrapped, or both, to provide stability and in a manner that will not cause them to fall or leak.
- a. For large containers ( $\geq 50$  gallon capacity) the maximum stacking height per pallet is one container. For small containers ( $<50$  gallon capacity), the maximum stacking height per pallet is 48 inches.
  - b. Containers shall not be stacked more than:
    - three pallets high in buildings E-2 (exclusive of the workstations and spaces 1 through 12 in row G), E-3, E-4 (exclusive of the decant area and repack area), and E-7;
    - two pallets high in building E-6, the refrigerated trailers parked in E-1, E-5, or E-4 receiving docks, the breezeway, spaces 1 through 11 in row G of building E-2, and bays 1-6 (bays 1 and bay 6 only when in storage mode);
    - one pallet high in the receiving and holding areas of buildings E-1 and E-5, bays 1 and 6 when in receiving mode, WS1-WS3, the decant area and repack area in building E-4, space 12 in row G of building E-2, the drum

pumping storage area, the drum pumping station, and the drive through direct burn station.

- c. Containers placed or stacked on the feed conveyors need not be on pallets. If they are stacked, they must be stacked in such a way that they will not fall as they move on the conveyor. Stacking height is limited to 48 inches on the conveyors.
- d. Containers that have been legally shipped but do not meet the height limitations specified in Condition 3.D.15.a. may be off-loaded and held in the receiving and holding floor areas of buildings E-1 or E-5 or in bays 1 or 6 when in receiving mode. However, they must be reconfigured to meet the size requirements prior to placement in any of the other container management areas.
- e. Compressed gas cylinders shall be stored in racks containing compatible gases, with different types of gases separated in accordance with the International Fire Code. The cylinders shall be secured to prevent falling as described in IFC 30.

- 3.D.16. The Permittee shall prepare and maintain on-site an infectious waste management plan that addresses the applicable requirements of R315-316-2.
- 3.D.17. Except for sharps, infectious waste shall be contained in plastic bags or inside rigid containers. The bags shall be securely tied and the containers shall be securely sealed to prevent leakage or expulsion of solid or liquid wastes during storage and handling.
- 3.D.18. Infectious waste sharps shall be contained for storage, handling, and treatment in leak-proof, rigid, puncture-resistant containers which are taped closed or tightly lidded to preclude loss of contents.
- 3.D.19. All containers for containment of any infectious waste shall be red or orange, or if containers are not red or orange, shall be clearly identified with the international biohazard sign and one of the following labels: "INFECTIOUS WASTE," "BIOMEDICAL WASTE," or "BIOHAZARD."
- 3.D.20. A rigid infectious waste container may be reused for infectious or non-infectious waste if it is thoroughly washed and decontaminated each time it is emptied or if the surfaces of the container have been completely protected from contamination by disposable, unpunctured, or undamaged liners, bags or other devices that are removed with the infectious waste, and the surface of the liner has not been damaged or punctured.



- 3.D.21. Storage and containment areas must protect infectious waste from the elements, be ventilated to the outside, be only accessible to authorized persons, and be marked with prominent warning signs on, or adjacent to, the exterior doors or gates. The warning signs shall contain the international biohazard sign and shall state: "CAUTION - INFECTIOUS WASTE STORAGE AREA - UNAUTHORIZED PERSONS KEEP OUT" and must be easily read during daylight from a distance of 25 feet.
- 3.D.22. If infectious waste is on-site longer than seven days, it shall be stored at or below 40 degrees Fahrenheit.
- 3.D.23. Infectious waste shall be incinerated as soon as possible, but not to exceed 30 days after collection from the generator.
- 3.D.24. Building E-7 shall have a minimum of five air changes per hour.
- 3.D.25. The LEL monitor in building E-7 shall alarm at 10% LEL.
- 3.D.26. Storage of flammable liquids in building E-7 shall be limited to metal containers.
- 3.D.27. The Permittee shall maintain the foam-water fire protection system to each of the E-6 and E-7 container storage buildings.

3.E. CONTAINMENT

- 3.E.1. The secondary containment systems shall be operated and maintained such that they shall be free of both cracks and gaps and are sufficiently impervious to contain leaks, spills, and accumulated precipitation until the collected material is detected and removed.
- 3.E.2. The Permittee shall empty all liquid and remove accumulated waste from a sump or secondary containment area no later than 24 hours after discovering the contents. All liquids and other materials collected from a sump or secondary containment area shall be considered a hazardous waste and shall be managed appropriately.
- 3.E.3. Containment for 10% of the volume of containers or the volume of the largest container, whichever is greater, shall be maintained for each container management area identified in Condition 3.A.2., with the exception of the cylinder storage area and cylinder feed station, which require no secondary containment.
- 3.E.4. The Permittee shall maintain the system for diverting run-on around the direct burn pad in good repair so that run-on to the pad is prevented.

- 3.E.5. The Permittee shall maintain the secondary containment system for the direct burn vessel feed area so that any liquid will drain from the direct burn pad to sump SP-624 without puddling.
- 3.F. DIRECT BURN VESSELS
- 3.F.1. The Permittee is authorized to use up to four direct burn vessels, subject to the requirements of this module. Each direct burn vessel shall be marked with a unique identifying number and will be tracked in accordance with Attachment 8.
- 3.F.2. All direct burn vessels shall be stored only in the permitted container management areas specified in Condition 3.A.2.
- 3.F.3. The Permittee shall maintain and operate the direct burn vessels in accordance with the drawings and procedures contained in Attachments 10 and 8.
- 3.F.4. Modifications to the drawings and operations for the direct burn vessels shall be allowed only in accordance with the permit modification requirements in Condition 1.D.
- 3.F.5. All direct burn vessels shall be nitrogen blanketed.
- 3.F.6. All direct burn vessels shall have emergency pressure relief valves that shall be vented to atmosphere.
- 3.F.7. All direct burn vessels shall be equipped with an anti-static inlet.
- 3.F.8. The Permittee shall empty and visually inspect each direct burn vessel for the general condition of the vessel and measure the corrosion of each direct burn vessel at least once each year and certify that it can safely store hazardous waste. The certification shall document that the structural support, seams, connections, and pressure controls for each vessel have been adequately designed and that the vessel has sufficient structural strength and compatibility with the waste to be stored to ensure that it will not collapse, rupture, or fail. This certification must be made by an independent, qualified Utah registered professional engineer.
- 3.F.9. The Permittee shall not overfill any of the direct burn vessels.
- 3.F.10. The direct burn vessels shall always be closed except when the Permittee is adding or removing wastes, as allowed by this permit, to or from the vessels.

3.G. DIRECT BURN TANKERS (DRIVE THROUGH DIRECT BURN STATION AND TRUCK UNLOADING DIRECT BURN STATION)

- 3.G.1. Tankers of waste to be fed through the drive through direct burn system and containers to be decanted to a tanker shall be parked/placed within the drive through direct burn station secondary containment (formerly the loadout area south of the slag pad). Tankers of waste to be fed from the truck unloading direct burn system shall be parked in the east bay of the truck unloading building. See drawing D-034-M-002.
- 3.G.2. Wastes stored in either direct burn tanker station or fed from either tanker to the kiln shall be tracked in accordance with Attachment 8.
- 3.G.3. The Permittee shall maintain and operate the direct burn tanker systems in accordance with Attachments 8 and 10.
- 3.G.4. Modifications to the operation of the direct burn tanker systems shall be in accordance with Condition 1.D.
- 3.G.5. All direct burn tankers shall be nitrogen blanketed.
- 3.G.6. All direct burn tankers shall be grounded prior to and while being fed and/or filled.
- 3.G.7. The Permittee shall comply with 40 CFR 266.111(d)(2) as incorporated by reference into R315-14-7. The certification by the local Fire Marshall shall be obtained prior to the direct burn tanker systems being placed into operation.
- 3.G.8. As viewed from an area between the afterburner and front wall of the kiln, the Permittee shall maintain clear visibility of the direct burn tanker and the manifold/pump area of the drive through direct burn station at all times waste is present in the unit. The Permittee shall maintain a view of the direct burn tanker and the manifold/pump area of the truck unloading direct burn station through a video camera connected to a monitor in the control room at all times waste is present in the unit. An operator shall be present at the decant area whenever decant operations are occurring in the drive through direct burn station.
- 3.G.9. While feeding wastes from either the drive through direct burn system or the truck unloading direct burn system to the sludge lance (A-103), the lines shall be isolated from the sludge recirculation line to prevent ignitable or incompatible wastes from entering either of the sludge storage tanks (T-401 and/or T-406). Following the feeding of wastes from either the drive through direct burn system or the truck unloading direct burn system to the sludge lance (A-103), the lines shall be adequately flushed with an appropriate solvent to prevent ignitable or

incompatible wastes from entering either of the sludge storage tanks (T-401 and/or T-406).

- 3.G.10. When using the vacuum pump to decant from a container to a direct burn tanker, the vacuum pump shall automatically shut down and decant operations cease when the LEL measurement of the combined dilution air and vacuum pump vent reach 60% LEL.
- 3.G.11. When the backup carbon adsorption system is being used, no vacuum pump transfer of waste from a container to a tanker is allowed.

3.H. DIRECT BURN FROM A CONTAINER

- 3.H.1. Containers of waste to be fed through the drum pumping station shall be placed inside the glove box at the drum pumping station. See drawing D-034-M-002. The glove box will be sealed and vented prior to opening the drums or feeding to the kiln when processing flammable liquids, oxidizers, toxic and highly toxic materials.
- 3.H.2. Wastes processed through the drum pumping station shall be tracked in accordance with Attachment 8.
- 3.H.3. The Permittee shall maintain and operate the drum pumping station in accordance with Attachments 8 and 10.
- 3.H.4. Modifications to the operation of the drum pumping station shall be in accordance with Condition 1.D.
- 3.H.5. All containers holding flammable liquids at the drum pumping station shall be grounded prior to and while the waste is being fed to the kiln from the drum pumping station. The glove box and feed system shall also be grounded according to supplier recommended practice.
- 3.H.6. The Permittee shall comply with 40 CFR 266.111(d)(2) as incorporated by reference into R315-14-7. The certification by the local Fire Marshall shall be obtained prior to the drum pumping station being placed into operation.
- 3.H.7. The drum pumping feed station feed system shall be flushed with an appropriate fluid prior to feeding an incompatible waste so that reactions will not occur in the feed system.
- 3.H.8. Nitrogen blanketing will be used as needed to prevent explosive atmospheres from developing in the glove box and piping system.

- 3.H.9. The glove box shall be vented to the afterburner. In the event that air to the eductor fails, it shall automatically switch to nitrogen to continue venting the glove box.
- 3.H.10. The glove box shall be equipped with a fire detection system and a CO<sub>2</sub> fire suppression system. This system shall be maintained to immediately extinguish any fire in the glove box.
- 3.H.11. The glove box shall be equipped with an LEL sensor and alarms to provide warnings prior to the development of potentially explosive situations. The Permittee shall use these alarms and take appropriate corrective actions to prevent fires and explosions.
- 3.H.12. The glove box shall be equipped with explosion panels designed to protect workers in the area.
- 3.H.13. Prior to using the drum pumping station storage area, the storage area shall be delineated by marking the concrete with durable paint where the pallets of drums are to be stored.
- 3.H.14. When the drum pumping station storage area is in use, it shall be protected with physical barriers sufficient to prevent vehicular damage to containers in the area. It shall also be maintained clear of equipment, containers, debris, or other objects such that access to, and the movement of personnel, fire protection equipment, discharge control equipment, and decontamination equipment to all areas of the container storage area will not be impeded.